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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,300	09/25/2003	Keisuke Takahashi	117248	4822
25944	7590	10/12/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER BEATTY, ROBERT B	
			ART UNIT 2852	PAPER NUMBER

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,300

Applicant(s)

TAKAHASHI ET AL.

Examiner

Robert Beatty

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 26-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,10-17,24 and 25 is/are rejected.
- 7) ☒ Claim(s) 3,6-9 and 18-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Claims 26-36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/21/2005.

2. Applicant's election with traverse of invention I in the reply filed on 7/21/2005 is acknowledged. The traversal is on the ground(s) that the examination of both inventions could be made without serious burden. This is not found persuasive because invention I relates to a specific type of external induction heating device (i.e. spaced from both ends and both sides of the heating body) while invention II is more related to the heating roller structure and a general external induction heating device. Therefore, the search for the specific external induction heating device would be much more specific than a general external induction heating device and additionally would not require a search for the specific heat roller structure.

The requirement is still deemed proper and is therefore made FINAL.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2,4,10,12,16-17,24 are rejected under 35 U.S.C. 102(b) as being anticipated by Konno (JP# 08-152798).

Konno teach a fixing device comprising a rotatable heating roller 10, and an induction heater 14 comprising a coil 14a spaced from the exterior surface of the heating roller 10. The coil is wound like a tube on either end of the heating roller (see Fig. 9). The coil encompasses the end portions in an axial direction of the heating roller and includes side walls which encompass part of the sides of the heating roller parallel with the axial direction. The coil contain the center axis of the heating roller. A pressure roller 18 is in engagement with the heating roller and a recording paper with a toner image is passed between the nip of the heating roller and pressure roller in order to fix the toner image to the sheet. A driving source 26 and gear 24 is located outside the coil and transfers a driving force to the heating roller.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be

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patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Konno (JP# 08-152798) in view of Nakayama (JP# 2000-356919).

Konno taught supra discloses most of what is claimed except the coil being a litz coil having a plurality of wires with insulating films. Nakayama teach a fixing apparatus having an induction heating arrangement using a litz coil 3 with a plurality of wires with insulating film coverings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a litz coils for the induction coil because this a very well known coil for using in fixing devices having induction heaters and temperature rise of the coil can be prevented as taught in Nakayama.

6. Claims 11,13,25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konno (JP# 08-152798) in view of Umezawa (JP# 2001-43966).

Konno taught supra discloses most of what is claimed except the drive force coming from the pressure roller and the fixing device being located in an image forming apparatus. Umezawa teach an image forming apparatus (see Fig. 9) having a photosensitive drum 52, a developing device 55, a charger 53, a transfer device 56, and a fixing device 23 for fixing toner images to a paper sheet. The fixing device has a heating body 1 and a pressure body 6 forming a nip where the sheets pass. The

pressure roller is rotatably driven via a gear 11 which in turn rotates the heating body. It would have been obvious to one of ordinary skill in the art at the time the invention was made to drive the heating body via the pressure body because this is alternatively known in the art of fixing devices for adequately rotating the members of the fixing device.

7. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konno (JP# 08-152798) in view of Hamada (JP# 2001-228740).

Konno taught supra discloses most of what is claimed except the heating body being driven by a belt drive mechanism. Hamada teach a fixing apparatus comprising a heating body 71 and a pressure body 72 biased under pressure into engagement. As seen in Figs 9-10, the heating body can be rotated by a drive belt 79b. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a drive belt rather than a gear because uneven rotational drive can be avoided. Additionally, all materials are heat insulating to some degree.

8. Claims 3, 6-9, 18-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kobayashi et al., Parker, Higaya et al., Imai et al. and Miyanishi (JP) all teach various fixing devices with external inductive heating means.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Beatty whose telephone number is (571) 272-2130. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley, can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "Robert Beatty", with a long horizontal flourish extending to the right.

Robert Beatty
Primary Examiner
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October 9, 2005